CLAIMS

WE claim:

1. A method of constructing a composite comprising, in any order:

- selecting a first layer with a first surface energy;

- selecting a second layer with a second surface energy greater than said first surface energy;

- providing access in said first layer to said second layer;

- bonding said first and second layers;

so that said composite provides a unified structure, with said unified structure providing a differential energy gradient comprised of the difference in surface energy between said first surface energy and said second surface energy so that a liquid placed atop said first layer at least partially penetrates said access in said first layer to said second layer.

2. A method as in claim 1 further comprising providing access in said first layer to said second layer through activating said composite.

3. A method as in claim 1 further comprising selecting a first layer with a first surface energy further comprising a hydrophobic surface energy.

4. A method as in claim 1 further comprising selecting a second layer with a second surface energy further comprising a hydrophilic surface energy.

5. A method as in claim 1 further comprising selecting a first layer with a first surface energy through providing said first layer with a desired surface energy.

6. A method as in claim 1 further comprising selecting a second layer with a second surface energy greater than said first surface energy through providing said second layer with a desired surface energy.

7. A method as in claim 1 further comprising providing a first nonwoven layer.

8. A method as in claim 1 further comprising providing a second thermoplastic layer.

9. A method of constructing a composite comprising, in any order:

- providing a first nonwoven film layer;

- providing a second thermoplastic film layer;

- providing access in said first nonwoven film layer, to said second thermoplastic film layer;

- providing said first nonwoven film layer with a first hydrophobic surface energy;

- providing said second thermoplastic film layer with a second hydrophilic surface energy greater than said first surface energy;

- bonding said first nonwoven film layer to said second thermoplastic film layer;

so that said composite provides a unified structure, with said unified structure providing a differential energy gradient comprised of the difference in surface energy between said first surface energy and said second surface energy so that a liquid placed atop said first nonwoven film layer at least partially penetrates said access in said first nonwoven film layer to said second thermoplastic film layer.

10. A method of constructing a composite comprising, in any order:

- providing a first layer;

- providing a second layer;

- providing apertures in said second layer;

- providing said first layer with a first surface energy;

- providing said second layer with a second surface energy greater than said first surface energy;

so that said composite provides a unified structure, with said unified structure providing a differential energy gradient comprised of the difference in surface energy between said first surface energy and said second surface energy.

11. A method as in claim 10 further comprising providing apertures in said second layer using a pressure differential source.

12. A method as in claim 10 further comprising providing access in said first layer through activating said composite.

13. A method as in claim 10 further comprising providing access in said first layer to at least one of said apertures so that a liquid placed atop said first layer at least partially penetrates said access in said first layer to said second layer.

14. A method as in claim 13 further comprising providing said second layer with a second surface energy greater than said first surface energy which is sufficient to at least partially drive fluid through at least one of said apertures of said second layer and so through said composite.

15. A method as in claim 13 further comprising providing a differential between said first surface energy and said second surface energy which is sufficient to at least partially drive fluid through said at least one of said apertures of said second layer to said liquid and so through said composite.

16. A method as in claim 10 further comprising selecting a first layer with a first surface energy further comprising a hydrophobic surface energy.

17. A method as in claim 10 further comprising selecting a second layer with a second surface energy further comprising a hydrophilic surface energy.

18. A method as in claim 10 further comprising providing a first nonwoven layer.

19. A method as in claim 10 further comprising providing a second thermoplastic layer.

20. A method of constructing a composite comprising, in any order:

- providing a first nonwoven layer;

- providing a second thermoplastic layer;

- providing apertures in said second thermoplastic layer using a pressure differential source;

- providing said first nonwoven layer with a first hydrophobic surface energy;

- providing said second thermoplastic layer with a second hydrophilic surface energy greater than said first surface energy;

so that a liquid placed atop said first nonwoven layer is at least partially driven into at least one of said apertures in said second thermoplastic layer.

21. A composite comprising a unified structure comprising, in any order:

- a first layer with a first surface energy and having at least one recess;

- a second layer with a second surface energy which is greater than said first surface energy;

with said unified structure providing a differential energy gradient comprised of the difference in surface energy between said first surface energy and said second surface energy so that a liquid placed atop said first layer at least partially penetrates said recess in said first layer to said second layer.

22. A composite comprising:

- a first layer with a first surface energy and having at least one recess;

- a second layer with a second surface energy which is greater than said first surface energy and having at least one aperture;

with said at least one recess providing access to said at least one aperture sufficient to provide for a liquid being placed atop said first layer to be driven at least partially through said at least one recess and into said at least one aperture, provided that the differential between said first surface energy and said second surface energy is sufficient to at least partially drive fluid

through at least one of said apertures of said second layer and so through said composite.

23. A material for use in an absorbent article having a topsheet, and absorbent core, and a backsheet, the material comprising:

- a substantially hydrophobic nonwoven layer; and

- a substantially hydrophilic film layer bonded with the nonwoven layer such that areas of the film layer are exposed through the nonwoven layer.

24. A material for use in an absorbent article having a body facing side and a garment facing side, the material comprising:

- a substantially hydrophobic nonwoven layer; and

- a substantially hydrophilic film layer on the garment facing side of the nonwoven layer; the nonwoven layer having areas where the film layer is exposed to the body facing side of the nonwoven layer.

25. The material of claims 23 or 24 wherein the formed film layer and the nonwoven layer form a composite.

26. The materials of claims 23 or 24 wherein the formed film layer and the nonwoven layer form an activated composite.

27. A method for forming a material for use in an absorbent article, the method comprising, in any order:

- introducing a first molten thermoplastic material to a vacuum forming drum;

- exerting a vacuum on the vacuum forming drum to form a film;

- introducing fibers of a second thermoplastic material onto the film during, or soon after formation of the film to create a composite; and

- introducing the composite to an activation process to create localized disturbances in the nonwoven portion of the composite such that the film is exposed through the nonwoven portions.

28. A method for forming a material for use in an absorbent article, the method comprising:

- introducing a first molten thermoplastic material to a vacuum forming drum;

- exerting a vacuum on the vacuum forming drum to form a film;

- introducing molten fibers of a second thermoplastic material onto the film during, or soon after formation of the film to create a composite; and

- introducing the composite to an activation process to create localized disturbances in the nonwoven portion of the composite such that the film is exposed through the nonwoven portions.

29. The method of claim 28 wherein:

- the first thermoplastic material is more hydrophilic than the second thermoplastic material.

30. An absorbent article using the materials of the above claims as a topsheet.

31. An absorbent article using the materials of the above claims as an intermediate layer.

32. An absorbent article having a body facing side and a garment facing side opposite the body facing side, the body facing side having a topsheet comprising:

- a formed film layer; and

- a nonwoven layer on the body facing side of the formed film and having disturbances that allow a plurality of portions of the formed film to be exposed to the body facing side of the article.

33. An absorbent article comprising a composite, which further comprises a first layer and a second layer, with said first layer having a first surface energy and access to said second layer comprising at least one recess, and said second layer having a second surface energy greater than said first surface energy; so that said composite provides a unified structure, with said unified structure providing a differential energy gradient comprised of the difference in surface energy between said first surface energy and said second surface energy so that a liquid placed atop said first layer at least partially penetrates said recess in said first layer to said second layer.

34. An absorbent article as in claim 33 further comprising a female menstrual product.

35. An absorbent article as in claim 34 wherein said female menstrual product is a sanitary napkin.

36. An absorbent article as in claim 34 further comprising an incontinence product.

37. An absorbent article as in claim 33 further comprising an adult incontinence product.

38. An absorbent article as in claim 33 further comprising a child incontinence product.

39. An absorbent article as in claim 33 further comprising an infant incontinence product.

40. An absorbent article as in claim 33 further comprising a bandage.